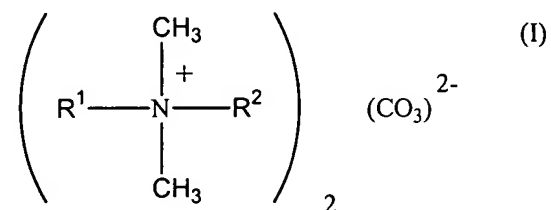


## CLAIMS:

1. A method for inhibiting corrosion of a metal substrate comprising the step of contacting the substrate with a corrosion inhibiting effective amount of a composition comprising:

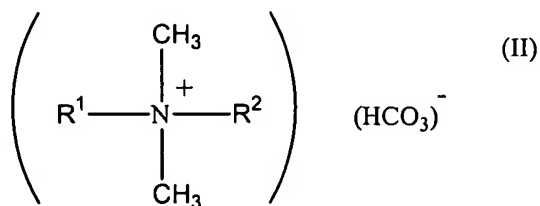
- (a) at least one quaternary ammonium compound selected from a quaternary ammonium carbonate, a quaternary ammonium bicarbonate, and mixtures thereof; and
- (b) optionally, a solvent.

2. The method of claim 1, wherein the quaternary ammonium carbonate has the formula:



wherein R<sup>1</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl or aryl-substituted C<sub>1</sub>-C<sub>20</sub> alkyl group, and R<sup>2</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl or aryl-substituted C<sub>1</sub>-C<sub>20</sub> alkyl group.

3. The method of claim 1, wherein the quaternary ammonium bicarbonate has the formula:



wherein R<sup>1</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl or aryl-substituted C<sub>1</sub>-C<sub>20</sub> alkyl group, and R<sup>2</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl or aryl-substituted C<sub>1</sub>-C<sub>20</sub> alkyl group.

4. The method of claim 2, wherein R<sup>1</sup> and R<sup>2</sup> are the same C<sub>1</sub>-C<sub>20</sub> alkyl group.
5. The method of claim 2, wherein R<sup>1</sup> and R<sup>2</sup> are C<sub>10</sub> alkyl groups.
6. The method of claim 5, wherein R<sup>1</sup> and R<sup>2</sup> are n-C<sub>10</sub> alkyl groups.
7. The method of claim 2, wherein one of R<sup>1</sup> or R<sup>2</sup> is methyl.
8. The method of claim 7, wherein R<sup>1</sup> and R<sup>2</sup> are methyl.
9. The method of claim 2, wherein one of R<sup>1</sup> and R<sup>2</sup> is benzyl or ethylbenzyl.
10. The method of claim 1, wherein the quaternary ammonium carbonate is didecyldimethyl ammonium carbonate and the quaternary ammonium bicarbonate is didecyldimethyl ammonium bicarbonate.
11. The method of claim 1, wherein the composition further comprises:
  - (c) a surfactant selected from amine oxides, linear alcohol ethoxylates, secondary alcohol ethoxylates, ethoxylate ethers, betamines, and mixtures thereof.

12. The method of claim 11, wherein the surfactant is nonylphenol ethoxylate.
13. The method of claim 1, wherein the metal substrate is in an oil environment.
14. The method of claim 13, wherein the oil environment comprises a petroleum distillate.
15. The method of claim 14, wherein the petroleum distillate is selected from kerosene, white spirit, hydrocarbon fractions, and mixtures thereof.
16. The method of claim 1, wherein the composition further comprises
- (d) a builder;
  - (e) a colorant;
  - (f) a perfume;
  - (g) a fragrance; or
  - (h) a combination thereof.
17. The method of claim 1, wherein the metal substrate is selected from steel, cast iron, aluminum, metal alloys and combinations thereof.

18. An anti-corrosive coating for a metal substrate comprising
- (a) at least one quaternary ammonium carbonate, quaternary ammonium bicarbonate, or a mixture thereof; and
- (b) a coating material.
19. The anti-corrosive coating of claim 18, wherein the quaternary ammonium carbonate, bicarbonate, or mixture thereof is dispersed in the coating material.
20. An aqueous solution comprising a corrosion inhibiting effective amount of at least one quaternary ammonium carbonate, quaternary ammonium bicarbonate, or a mixture thereof.
21. The aqueous solution of claim 20, wherein the aqueous solution is a cleaning solution.